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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,577	03/24/2006	Tomoya Yamamoto	25613-000012/US	5087
30593	7590	08/21/2007		
HARNESS, DICKEY & PIERCE, P.L.C.			EXAMINER	
P.O. BOX 8910			SHAH, MANISH S	
RESTON, VA 20195				
			ART UNIT	PAPER NUMBER
			2853	
			MAIL DATE	DELIVERY MODE
			08/21/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/573,577

Applicant(s)

YAMAMOTO ET AL.

Examiner

Manish S. Shah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____                                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/24/8/31/10/24</u> .   | 6) <input type="checkbox"/> Other: ____                           |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4 & 6-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (# US 2002/0180854) in view of Nagai et al. (# US 2002/0135650).

Sato et al. discloses :

- An inkjet recording ink comprising a high-molecular dispersant ([0064]-[0069], [0149]), a water-insoluble colorant which is at least one colorant selected from the group consisting of C.I. Pigment Yellow 74, C.I. Pigment Yellow 93, C.I. Pigment Yellow 95, C.I. Pigment Yellow 128, C.I. Pigment Yellow 151 ([0077]), a water-soluble organic solvent ([0157], [0182]), and water (see Examples), characterized in that said high-molecular dispersant is a block copolymer comprising at least one hydrophobic block and at least one hydrophilic block, and said at least one hydrophobic block and at least one hydrophilic block have been obtained by polymerizing vinyl ethers as monomers, respectively ([0065]-[0069], [0133]-[0136]).

- An inkjet recording ink comprising a high-molecular dispersant ([0064]-[0069], [0149]), a water-insoluble colorant which is at least one colorant selected from the group consisting of C.I. Pigment Black 1, C.I. Pigment Black 7, C.I. Pigment Black 10, C.I.

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Pigment Black 31, and C.I. Pigment Black 32 ([0074]), a water-soluble organic solvent ([0157], [0182]), and water (see Examples), characterized in that said high-molecular dispersant is a block copolymer comprising at least one hydrophobic block and at least one hydrophilic block, and said at least one hydrophobic block and at least one hydrophilic block have been obtained by polymerizing vinyl ethers as monomers, respectively ([0065]-[0069], [0133]-[0136]).

- An inkjet recording ink comprising a high-molecular dispersant ([0064]-[0069], [0149]), a water-insoluble colorant which is at least one colorant selected from the group consisting of C.I. Pigment Red 12, C.I. Pigment Red 122, C.I. Pigment Red 184, C.I. Pigment Red 202, C.I. Pigment Violet 19, and C.I. Pigment Violet 32, a water-soluble organic solvent ([0157], [0182]), and water (see Examples), characterized in that said high-molecular dispersant is a block copolymer comprising at least one hydrophobic block and at least one hydrophilic block, and said at least one hydrophobic block and at least one hydrophilic block have been obtained by polymerizing vinyl ethers as monomers, respectively ([0065]-[0069], [0133]-[0136]).

- An inkjet recording ink comprising a high-molecular dispersant ([0064]-[0069], [0149]), a water-insoluble colorant which is at least one colorant selected from the group consisting of C.I. Pigment Blue 15:1, C.I. Pigment Blue 15:2, C.I. Pigment Blue 15:3, C.I. Pigment Blue 15:4, and C.I. Pigment Blue 15:6 ([0075]), a water-soluble organic solvent ([0157], [0182]), and water (see Examples), characterized in that said high-molecular dispersant is a block copolymer comprising at least one hydrophobic block and at least one hydrophilic block, and said at least one hydrophobic block and at least

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one hydrophilic block have been obtained by polymerizing vinyl ethers as monomers, respectively ([0065]-[0069], [0133]-[0136]).

- A hydrophilic block in said high-molecular dispersant is formed of an anionic vinyl ether or a nonionic vinyl ether ([0123]-[0142]; see Examples; see Claims 1-26).

- A hydrophilic block in said high-molecular dispersant is composed of at least two blocks consisting of a block formed of a nonionic vinyl ether and a block formed of an anionic vinyl ether ([0123]-[0142]).

- A high-molecular dispersant is composed of a block formed of one of hydrophobic vinyl ethers, a block formed of one of nonionic hydrophilic vinyl ethers and a block formed of one of anionic hydrophilic vinyl ethers at least in this order ([0123]-[0142]).

- An inkjet recording method, which is conducted by applying energy to an ink to cause said ink to fly onto a recording medium, wherein the energy is thermal energy (see Examples).

- A recording medium has an ink-receiving coating layer on at least one of opposite sides thereof (see Examples).

- An ink cartridge provided with an ink reservoir with an ink stored therein (see figures: 1-5).

- An inkjet recording system provided with an ink cartridge, which is provided with an ink reservoir with an ink stored therein, and also with a recording head portion for ejecting said ink (see Examples; figure: 1-5).

Sato et al. differs from the claim of the present invention is that the ink composition comprises at least one compound selected from the group consisting of a calcium compound and a magnesium compound, wherein a weight ratio of a sum (A) of said calcium compound and said magnesium compound to said high-molecular dispersant (B), A:B is in the range of from 1:50,000 to 1:200. (2) The inkjet recording ink comprises further an aluminium compound.

Nagai et al. teaches that to get the bleed free printed image, ink composition comprises at least one compound selected from the group consisting of a calcium compound and a magnesium compound, wherein a weight ratio of a sum (A) of said calcium compound and said magnesium compound to said high-molecular dispersant (B), A:B is in the range of from 1:50,000 to 1:200. They also teach that the inkjet recording ink comprises further an aluminium compound ([0081]-[0083]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink composition of Sato et al. by the aforementioned teaching of Nagai et al. in order to have a bleed free printed image.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manish S. Shah whose telephone number is (571) 272-2152. The examiner can normally be reached on 8:00am-4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Manish S. Shah  
Primary Examiner  
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MSS

8/20/07